



**FIXED PRICE
RESEARCH & DEVELOPMENT CONTRACT**

Contract No. **Specimen Contract**
Dated July 17, 2003

BETWEEN

CALIFORNIA INSTITUTE OF TECHNOLOGY
JET PROPULSION LABORATORY
(The "Institute" or "JPL")
4800 OAK GROVE DRIVE
PASADENA, CALIFORNIA 91109-8099

AND

TBD

THIS CONTRACT FOR

Technology Development of the Mars Landing Radar Antenna Array

IS A

SUBCONTRACT UNDER JPL's NASA PRIME CONTRACT

TASK ORDER NO. 10137

A DO - C9 Rating is assigned to this Contract under DMS Regulation 1

CONTENTS

PREAMBLE	A
ARTICLE 1. STATEMENT OF WORK AND DELIVERY INSTRUCTIONS.....	1
ARTICLE 2. PRICE AND PAYMENT.....	5
ARTICLE 3. OPTION.....	6
ARTICLE 4. LIMITATION OF JPL's OBLIGATION.....	7
ARTICLE 5. SPECIAL PROVISIONS.....	9
SIGNATURE PAGE	10

The following documents are incorporated into and made a material part of this contract.

GENERAL PROVISIONS: Fixed-Price Research and Development Contract R 8/03, with Included Exhibits.

JPL 1737, "Release of Information" R 9/99

JPL 2385, "Notification to Prospective Contractors of JPL's Ethics Policies and Anti-Kickback Hotline"
R 7/91

JPL 2892, "Certifications" R 8/01

JPL 2895, "Asbestos Notification" R 9/98

Notice of Potential Tax Withholding R 7/03

ADDITIONAL GENERAL PROVISIONS (AGPs)

New Technology R 8/01 (Large Business)

OR

Patent Rights - Retention By The Contractor (Short Form) R 4/99 (Small Business)

Progress Payments R 4/99 (Large Business)

OR

Progress Payments - Small Business R 4/99 (Small Business)

Prime Contract Expiration – Fixed Price R 3/03

PREAMBLE

This Contract, entered into on TBD by and between the CALIFORNIA INSTITUTE OF TECHNOLOGY (hereinafter called the "Institute" or "JPL"), a corporation organized and existing under the laws of the State of California, and TBD (hereinafter called the "Contractor"), a corporation organized and existing under the laws of the State of TBD and constituting a subcontract under prime contract with NASA;

WITNESSETH THAT:

The Contractor agrees to furnish and deliver the supplies and perform the services set forth in this Contract for the consideration stated herein.

Schedule

ARTICLE 1. STATEMENT OF WORK AND DELIVERY INSTRUCTIONS

On or Before

- 1.0 The Contractor shall provide the necessary labor, facilities, services, and management to perform the following tasks and meet the requirements for a 16 element subarray and a 128 element prototype array In Accordance With (IAW) Exhibit I.

In the performance of this effort the Contractor shall:

- 1.1 Design, fabricate and deliver a 16 element subarray.
- 1.1.1 Provide, for JPL approval, a detailed design and provision of technical specifications to the JPL Phased Array Terrain Radar (PATR) technology development team. 3 Weeks After Date of Contract (ADOC)
- 1.1.1.1 Interact with the JPL PATR technology development team regarding mechanical and electrical interfaces to antenna elements. (Approximate time required for this support: 2 FTE work weeks.)
- 1.1.2 Fabricate 16 element subarray and verify individual element performance IAW Exhibit I and the JPL approved design developed under paragraph 1.1.1.
- 1.1.3 Deliver to JPL, 16 element subarray for JPL evaluation and testing. 12 weeks ADOC
- 1.1.4 Interact with JPL PATR technology development team on the 16 element subarray performance and issues relating to the construction of 128 element prototype array. (Approximate time required for this support: 2 FTE work weeks.)
- 1.2 Design, fabricate and deliver a 128 element prototype array.
- 1.2.1 Provide, for JPL approval, a detailed design and provision of technical specifications of 128 element prototype array to the JPL PATR technology development team. The design shall incorporate JPL feedback provided under paragraph 1.3.2. 18 weeks ADOC
- 1.2.2 Fabricate 128 element prototype array and verify individual element performance IAW Exhibit I and the JPL approved design developed under paragraph 1.2.1.
- 1.2.3 Deliver to JPL, 128 element prototype array for JPL evaluation and testing. 10 Months ADOC

- 1.2.4 Interact with JPL PATR technology development team on 128 element prototype array performance and issues relating to the construction of 128 element flight qualified array. (Approximate time required for this support: 2 FTE work weeks.)
- 1.3 Meetings
 - 1.3.1 Conduct monthly teleconferences covering technical/schedule status and problems including any schedule variance. Monthly, continuing through 9/30/04
 - 1.3.2 Conduct the First Technical Interchange Meeting at the Contractor's site to discuss JPL feedback on performance of the 16 element subarray delivered under paragraph 1.1.3. JPL's feedback shall be incorporated into 128 element prototype design required under paragraph 1.2.1. 6 Weeks from delivery of 16 element subarray
 - 1.3.3 Conduct the Second Technical Interchange Meeting at JPL to discuss JPL feedback including integration and test results from the first 128 element prototype array delivered under paragraph 1.2.3. 12 Weeks from delivery of the first 128 element prototype array
- 1.4 Plans and Documentation
 - 1.4.1 Submit an initial baseline work schedule identifying critical milestones. 1 week ADOC
 - 1.4.2 Submit an informal monthly status report identifying technical/schedule status and problems including any schedule variance. Monthly, continuing through 9/30/04
- 2.0 The following Exhibit is hereby incorporated into and the references therein are made a material requirement of this Contract:
 - 2.1 Exhibit I – Mars Landing Radar Antenna Array Functional Requirements Document, dated July 17, 2003
- 3.0 JPL will
 - 3.1 Review and approve or disapprove the Contractor provided technical specification for a 16 element subarray and a 128 element prototype array within ten (10) working days after receipt at JPL (unless otherwise specified).
 - 3.2 Select the position of elements within the array per Exhibit I. 2 days ADOC

OPTION 1

- 4.0 The Contractor shall provide the necessary labor, facilities, services, and management to perform the following tasks and meet the requirements for a second 128 element prototype array In Accordance With (IAW) Exhibit I and the 128 element prototype array developed under paragraph 1.2.3.
- 4.1 Design, fabricate and deliver a 128 element prototype array.
- 4.1.1 Fabricate a 128 element prototype array and verify individual element performance.
- 4.1.2 Deliver to JPL, 128 element prototype array for JPL evaluation and testing. 7 weeks after execution of Option 1
- 4.2 Meetings
- 4.2.1 Continue to conduct monthly teleconferences as specified in paragraph 1.3.1 Monthly
- 4.2.2 Conduct the Third Technical Interchange Meeting at the Contractor's site regarding evaluation of test results for all prototype arrays developed under this Contract. 10 weeks after delivery of the second 128 element prototype array
- 4.3 Plans and Documentation
- 4.3.1 Submit an updated baseline work schedule identifying critical milestones. 1 week after execution of Option 1
- 4.3.2 Continue to submit an informal monthly status report as specified in paragraph 1.4.2. Monthly
- 5.0 Delivery Instructions
- 5.1 Except as otherwise provided in this Contract, the point of inspection, acceptance and delivery of all supplies deliverable under this Contract shall be the Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, California 91109. All such supplies shall be packaged, packed, boxed, or crated in such a manner to ensure safe delivery and shall be shipped prepaid and at the Contractor's expense to the point of delivery.
- 5.2 Time is of the essence in the performance of this Contract
- 5.3 The period of performance shall extend from date of Contract through September 30, 2004.
- If New Technology is Applicable **DELETE IF NOT**
- 5.4 The Contractor shall furnish the Contracting Officer (CO) with the annual and final reports of reportable items described in the Article entitled "New Technology." Copies of transmittal letters for those reports shall be sent to the JPL Intellectual Property Office (IPO) and to the cognizant JPL negotiator.

OR

If Patent Rights is Applicable **DELETE IF NOT**

- 6.3 The Contractor shall provide the Contracting Officer (CO) the annual and final reports of subject inventions described in the Article entitled "Patent Rights - Retention by the Contractor (Short Form)." Copies of transmittal letters shall be sent to the JPL Intellectual Property Office (IPO) and to the cognizant JPL negotiator.

ARTICLE 2. PRICE AND PAYMENT

1.0 Price consisting of:

One (1) 16 Element Subarray as specified in Article 1, paragraph 1.1.3 at \$ TBD
One (1) 128 Element Prototype Array as specified in Article 1, paragraph 1.2.3 at \$ TBD

Total Fixed Price: \$TBD

2.0 Progress payments will be allowed according to the terms set forth in the Additional General Provision entitled
"Progress Payments - Small Business."

OR

2.0 Progress payments will be allowed according to the terms set forth in the Additional General Provision entitled
"Progress Payments."

3.0 Invoices. Invoices shall be submitted, in triplicate, to JPL Supplier Payment Section, M/S 601-208, 4800 Oak Grove Drive, Pasadena, California 91109.

The Contractor shall attach to each invoice, submitted in accordance with the General Provision of this Contract entitled "Payments and Discounts," a fully completed "Contractor's Request for Progress Payment," Standard Form 1443, or equivalent.

ARTICLE 3. OPTION

1.0 OPTION 1

- 1.1 JPL intends to exercise Option 1 as set forth under Article 1, Statement of Work and Delivery Instructions, paragraph 2.0, provided four conditions are met:
 - 1.1.1 Sufficient funds are approved and released by the Government,
 - 1.1.2 Either Task Order is modified to encompass this effort, the end date extended, or a new the current Task Order is approved by NASA Headquarters.
 - 1.1.3 The project's continued need exists, and
 - 1.1.4 The first delivered 128 element prototype array fully meets the requirements of the Contract.
- 1.2 Option 1 may be exercised no later than September 30, 2004 by JPL issuance of a Unilateral Modification to the Contract.
- 1.3 The Contractor shall not expend any effort or incur any costs for Option 1 work prior to JPL exercising of the Option. Should JPL not extend/Option this Contract by the current end date, the work products or services delivered through the current end date shall become the final deliverables for this Contract.
- 1.4 If the Option is exercised, Article 2, Price and Payment, will be modified as follows:

Under paragraph 1.0, add an additional "128 Element Prototype Array as specified in Article 1, paragraph 4.1.2 at \$TBD" and delete the Total Fixed Price \$TBD and substitute \$TBD.
- 1.5 Except as modified above, all terms and conditions of this Contract will remain unchanged.

ARTICLE 4. LIMITATION OF JPL's OBLIGATION

- 1.0 The Firm Fixed Price of this Contract is the amount set forth in paragraph 1.0 of ARTICLE 2, PRICE AND PAYMENT, subject to the limitations set forth in this Article.
- 2.0 Subject to paragraph 6.0 below, the amount set forth in Period No. 1 of the following Incremental Liability Schedule reflects the maximum limitation of the Institute's liability for all purposes, including incurred costs, termination costs (including amounts payable with respect to subcontracts and settlement costs) and allowance for profit or fee:

INCREMENTAL LIABILITY SCHEDULE

<u>Period No.</u>	<u>Cumulative Maximum Liability</u>	<u>Terminal Date</u>
1	25%	10/31/03
2	75%	N/A

- 3.0 It is anticipated that JPL shall, prior to the terminal date, if any, of the Period specified in the first line of paragraph 2.0 above, issue a Unilateral Modification to revise the maximum limitation to the amount set forth in the next successive period. The determination as to whether to issue such a modification shall be at JPL's sole discretion. In the event that JPL does not issue such a modification prior to the terminal date, this Contract shall, unless the Contractor requests a terminal date extension in writing prior to the terminal date, be deemed terminated for convenience and the Contractor shall proceed as if the Contractor has received a Notice of Termination pursuant to the GP Article entitled "Termination for Convenience." JPL shall, upon receipt of a written request from the Contractor for Terminal Date extension, immediately issue a unilateral modification extending the Terminal Date in accordance with Contractor's request. If the Contractor or JPL have reason to believe that any other change in the Incremental Liability Schedule would be in the best interest of the contract effort, the Contractor or JPL may notify the other party in writing to that effect, together with the requested change. If the Contractor and JPL agree with the requested change, the Incremental Liability Schedule will be revised by Supplemental Agreement to the Contract.
- 4.0 In the event that JPL issues such a UM to increase the liability after the terminal date, the Contract shall no longer be deemed terminated, and such UM shall have the same effect as if it had been issued prior to the terminal date; provided however, that if JPL's failure to issue the UM by the terminal date caused an increase of the cost of, or the time required for, performing this Contract, because the Contractor proceeded as if a Notice of Termination had been issued, an equitable adjustment shall be made in (i) the Contract Price, the time of performance, or both; and (ii) other affected terms of the Contract. The Contractor must assert its right to such equitable adjustment within 30 days of receipt of the UM. However, if JPL decides that the facts justify it, JPL may receive and act upon a proposal submitted before final payment of the Contract. Subject to paragraph 6.0 below, in the event that this Contract is terminated pursuant to this Article, or otherwise terminated by JPL pursuant to the GP Article entitled "Termination for Convenience," the cumulative liability amount set forth in the Incremental Liability Schedule for the Period referenced in the first sentence of paragraph 2.0 of this Article, reflects JPL's maximum liability notwithstanding anything to the contrary in the GP Article entitled "Termination for Convenience," or the value of supplies and services delivered to and retained by JPL.

- 5.0 The Contractor has used the Incremental Liability Schedule to plan its progress payments, partial payments, obligations and termination liability. It is a management prerogative of the Contractor to determine if any part of these elements are to be under funded or at risk (relative to the Incremental Liability Schedule) for any period of time. This is a firm fixed price type Contract. The Contractor assumes all risk for any variance between planned and actual costs, including planned and actual termination liability. The Contractor is strictly liable for all cost variances, including cost variances attributable to indirect rate changes and shall in no event be excused from the obligation to complete performance in accordance with the price, delivery schedule, and technical requirements of this Contract.
- 6.0 If the Contract is modified, the provisions of this Article shall not limit the Contractor's obligation pursuant to GP Article entitled "Changes," to diligently pursue the performance of the Contract as modified. In the event that a unilateral modification contains a liability limit for work performed under such modification, the Contractor's obligation to pursue performance of such modification and the Institute's liability for such modification, shall, until the UM(s) is bilaterally settled, be limited by the amount of the liability limit included in the UM. Until such a UM is settled, the liability limit on the UM does not increase the baseline liability in paragraph 2.0. In the event that this Contract is deemed terminated pursuant to paragraph 3.0 of this Article or the GP Article entitled "Termination for Convenience," prior to the settlement of an outstanding UM(s), the Institute's maximum liability for all purposes, including incurred costs, termination costs (including amounts payable with respect to subcontracts and settlement costs and consideration for delivered supplies and services) and allowance for profit or fee, shall be no more than the sum of the cumulative liability amount set forth in the Incremental Liability Schedule for the Period referenced in the first sentence of paragraph 2.0 of this Article, plus the liability limit(s) set forth in the UM(s).
- 7.0 Unilateral Modification Liability Limits.
- 7.1 Reserved.
- 7.2 Reserved.
- 8.0 In the event that this Contract contains a provision providing for progress payments, such provision shall be subject to the limitations set forth in this Article and the "contract amount" referred to in any such provision for progress payments is the Firm Fixed Price of this Contract set forth in paragraph 1.0 of ARTICLE 2, PRICE AND PAYMENT.
- 9.0 The provisions of this Article shall in no way limit the Institute's rights under the GP Article entitled Default.

ARTICLE 5. SPECIAL PROVISIONS

1.0 Data Removal from Computers.

The Contractor shall erase or otherwise remove all data (which can include sensitive, Privacy Act, proprietary, and mission critical data) from hard drives and other computer storage devices and remove licensed software from Government-owned computers before such computers leave the control of the Contractor organization by transfer or disposal. JPL data shall also be removed from Contractor-owned computers when the computer will be no longer used for this Contract. The Contractor shall archive all data required to be retained, pursuant to the "Rights in Data - General" Article. Guidance on what constitutes mission-critical data and sensitive information (such as business and restricted technology information and scientific, engineering, and research information) is contained in NASA Procedure and Guidelines for Security of Information Technology (NPG) 2810, available on the worldwide web or from the JPL Negotiator. Proprietary data consists of trade secrets and other commercial or financial information confidential to the individual owner or organization. Proprietary data is normally labeled as such. Trade secrets or commercial or financial information that has been released to the public or is otherwise in the possession of persons other than the individual owner or organization is in the public domain and may no longer be entitled to proprietary protection.

The Contractor shall submit to JPL a written certification that all applicable data has been erased or otherwise removed from computers when returned to JPL or disposed of.

IN WITNESS WHEREOF, the parties hereto have executed this Contract as of the day and year first above written.

CALIFORNIA INSTITUTE OF TECHNOLOGY

By _____

(Title)

TBD

By _____

(Signature)

(Typed Name)

(Title)

Instructions to Contractor: Do not insert date on Preamble page.